### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization International Bureau



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(43) International Publication Date 26 October 2000 (26.10.2000)

PCT

### (10) International Publication Number WO 00/62830 A3

- (51) International Patent Classification7: B05D 1/22, B05B 13/02, B05C 13/00, A61L 29/00, 31/00
- (21) International Application Number: PCT/US00/10316
- (22) International Filing Date: 18 April 2000 (18,04,2000)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

09/293,994 09/551,614 19 April 1999 (19.04.1999) US

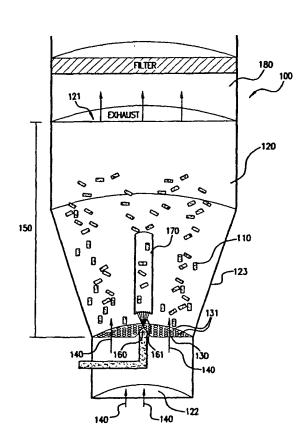
17 April 2000 (17.04.2000) US

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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT. TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent

[Continued on next page]

(54) Title: COATING MEDICAL DEVICES USING AIR SUSPENSION



(57) Abstract: Methods and apparatuses for coating medical devices and the devices thereby produced are disclosed. In one embodiment, the invention includes a method comprising the steps of suspending the medical device in an air stream and introducing a coating material into the air stream such that the coating material is dispersed therein and coats at least a portion of the medical device. In another embodiment, the medical devices are suspended in an air stream and a coating apparatus coats at least a portion of the medical device with a coating material. The coating apparatus may include a device that utilizes any number of alternative coating techniques for coating the medical devices. This process is used to apply one or more coating materials, simultaneously or in sequence. In certain embodiments of the invention, the coating materials include therapeutic agents, polymers, sugars, waxes, or fats. By using air suspensions to coat medical devices, the methods of the present invention result in coatings having minimal defects and uniform thicknesses and mechanical properties. Further, the methods of the present invention are time efficient and cost effective because they facilitate the coating of numerous medical devices in a single batch, resulting in numerous medical device units containing substantially the same coating.



(AM, AZ, BY, KG, KZ, MI), RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

(88) Date of publication of the international search report: 28 December 2000

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

#### INTERNATIONAL SEARCH REPORT

PCT/US 00/10316

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B0501/22 B058 B05B13/02 B05C13/00 A61L29/00 A61L31/00 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED  $\begin{array}{cccc} \mbox{Minimum documentation searched} & \mbox{(classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{B050} & \mbox{B05B} & \mbox{B05C} & \mbox{A61L} \\ \end{array}$ Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. χ US 3 089 824 A (D.E. WURSTER) 1,2, 13-25, 14 May 1963 (1963-05-14) 27,28, 30, 36-38, 42,43, 50,51 column 1, line 65 - line 67; example 1 US 2 648 609 A (D.E. WURSTER) X 1,2,16, 11 August 1953 (1953-08-11) 21, 23-25. 27, 36 - 38. 41-43. 50,51 the whole document -/--Further documents are listed in the continuation of box C. Patent family members are listed in annex. X Special categories of cited documents: "T" later document published after the international filling date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular refevance "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled in the art. "O" document referring to an oral disclosure, use, exhibition or document published prior to the international filling date but later than the priority date claimed. "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 11 October 2000 19/10/2000 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx 31 651 epo nl. Fax: (+31-70) 340-3016 Brothier, J-A

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